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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/808,677	03/15/2001	Dennis Niemann	1190-2115	5153

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EXAMINER

YAO, KWANG BIN

ART UNIT	PAPER NUMBER
2667	7

DATE MAILED: 08/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/808,677

Applicant(s)

NIERMANN, DENNIS

Examiner

Kwang B. Yao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5,6.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figures 1, 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-5, 12, 13, 18-25, 32, 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Liao et al. (US 6,611,533).

Liao et al. discloses a communication system comprising the following features: as depicted in Figs. 14, a method of routing Signaling System 7 SS7 signaling traffic over an Internet Protocol IP network (IP network) comprising the steps of: a first signaling gateway SG

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(326) receiving SS7 signaling traffic from a first signaling point; the first SG (326) transferring the SS7 signaling traffic over the IP network (IP network) by routing the traffic in an IP message stream to a second SG (327) supporting peer-to-peer signaling with the first SG (326) over the IP network (IP network); and the second SG (327) receiving the IP message stream and recovering the SS7 traffic from the IP message stream; regarding claim 2, the step of using a Network Indicator NI and a Destination Point Code DPC (COLUMN 13, LINE 38 TO COLUMN 14, LINE 14) to determine how to route the SS7 signaling traffic over the IP network (IP network); regarding claim 3, the step of using a NI and a DPC (COLUMN 13, LINE 38 TO COLUMN 14, LINE 14) to determine how to route the SS7 signaling traffic is preceded by the step of global title translation to reveal the DPC (COLUMN 13, LINE 38 TO COLUMN 14, LINE 14) of the signaling traffic; regarding claim 4, the step of the second SG (327) transmitting the SS7 signaling traffic to a second signaling point; regarding claim 5, the step of the first and second SG (327)s utilizing Message Transfer Part 3-User Adaptation Layer M3UA protocol to support peer-to-peer signaling; regarding claim 12, a signaling gateway for routing Signaling System 7 SS7 signaling traffic over an Internet Protocol IP backbone comprising: an SS7 interface to an SS7 signaling link; an IP interface to an IP signaling link; and conversion means (326) between the SS7 interface and the IP interface for converting SS7 signaling traffic received from the SS7 signaling link to IP traffic suitable for transmission over the IP signaling link; regarding claim 13, wherein the conversion means (326) comprises SS7 to IP conversion layers; regarding claim 18, A system for routing Signaling System 7 SS7 signaling traffic over an Internet Protocol IP network (IP network) comprising: two or more signaling points, each signaling point capable of sending and receiving SS7 signaling traffic over an SS7 network; a first signaling gateway SG

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(326) adapted for receiving SS7 signaling traffic from a first signaling point over the SS7 network, the first SG (326) configured to convert SS7 signaling traffic into an IP message stream and to route the IP message stream on the IP network (IP network); a second SG (327) configured to receive the IP message stream via peer-to-peer IP communications over the IP network (IP network) with the first SG (326) and to recover the SS7 signaling traffic from the IP message stream, the second SG (327) adapted to route recovered SS7 signaling traffic to a specific second signaling point on the SS7 network; regarding claim 19, wherein at least one of the signaling points is an SS7 Signaling Transfer Point STP (COLUMN 9, LINES 44-52); regarding claim 20, wherein at least one of the signaling points is an SS7 Signaling End Point SEP (COLUMN 11, LINES 46-51); regarding claim 21, wherein the SEP (COLUMN 11, LINES 46-51) is an SS7 Service Switch Point SSP; regarding claim 22, wherein the SEP (COLUMN 11, LINES 46-51) is an Mobile Switching Center; regarding claim 23, wherein the first SG (326) is further configured to use a Network Indicator NI and a Destination Point Code DPC (COLUMN 13, LINE 38 TO COLUMN 14, LINE 14) to determine how to route the signaling traffic; regarding claim 24, wherein the first SG (326) uses Global Title Translation to determine the DPC (COLUMN 13, LINE 38 TO COLUMN 14, LINE 14); regarding claim 25, wherein the first and second SG (327) share the same Destination Point Code DPC (COLUMN 13, LINE 38 TO COLUMN 14, LINE 14) thereby conserving DPC (COLUMN 13, LINE 38 TO COLUMN 14, LINE 14)s; regarding claim 32, wherein the first SG (326) is configured to recover SS7 signaling traffic from the IP message stream; regarding claim 33, wherein the second SG (327) is configured to convert SS7 signaling traffic into the IP message stream. See column 7-21.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6-11, 14-17, 26, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liao et al. (US 6,611,533) in view of Shmulevich et al. (US 6,515,985).

Liao et al. discloses the claimed limitations above. Moreover, Liao et al. disclose the following features: regarding claim 11, the step of routing said SS7 traffic using the destination revealed after global title translation (column 11, lines 25-45; column 13, line 38 to column 14, line 14; column 16, lines 15-33); regarding claim 16, wherein said SS7 to IP conversion layers include an SCCP protocol layer (column 9, line 34-37; column 12, line 28 to column 14, line 39); regarding claim 17, wherein said SCCP protocol layer permits global title translation of said SS7 signaling traffic to a destination point code (column 9, line 34-37; column 12, line 28 to column 14, line 39). Liao et al. does not disclose the following features: regarding claim 6, step of said first and second SGs utilizing SCTP protocol to support peer-to-peer signaling; regarding claim 7, the step of said first and second SGs using SCTP associations for passing IP traffic; regarding claim 8, the step of using said SCTP associations for passing management-related messages between said first and second SG; regarding claim 9, the step of using Stream Control Transfer Protocol SCTP associations for passing destination availability messages between said first and second SG; regarding claim 10, the step of said first SG using SCCP protocol to translate the global title of said SS7 signaling traffic to a destination; regarding claim 14, wherein said SS7 to

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IP conversion layers include SCTP and Message Transfer Part 3-User Adaptation Layer M3UA protocols layers; regarding claim 15, wherein said SCTP and M3UA permit routing of SS7 signaling traffic over said IP signaling link based on the Network Indicator and Destination Point Code of said traffic; regarding claim 26, wherein said first SG uses a Stream Control Transfer Protocol SCTP to transport said IP message stream over said IP network; regarding claim 29, wherein said second SG uses a Stream Control Transfer Protocol SCTP to receive said IP message stream over said IP network. Shmulevich et al. discloses a communication system comprising the following features: regarding claim 6, step of said first and second SGs utilizing SCTP protocol to support peer-to-peer signaling (column 12, lines 24-63); regarding claim 7, the step of said first and second SGs using SCTP associations for passing IP traffic (column 12, lines 24-63); regarding claim 8, the step of using said SCTP associations for passing management-related messages between said first and second SG (column 12, lines 24-63); regarding claim 9, the step of using Stream Control Transfer Protocol SCTP associations for passing destination availability messages between said first and second SG (column 12, lines 24-63); regarding claim 10, the step of said first SG using SCCP protocol to translate the global title of said SS7 signaling traffic to a destination (column 12, lines 24-63); regarding claim 14, wherein said SS7 to IP conversion layers include SCTP and Message Transfer Part 3-User Adaptation Layer M3UA protocols layers (column 12, lines 24-63); regarding claim 15, wherein said SCTP and M3UA permit routing of SS7 signaling traffic over said IP signaling link based on the Network Indicator and Destination Point Code of said traffic (column 12, lines 24-63); regarding claim 26, wherein said first SG uses a Stream Control Transfer Protocol SCTP to transport said IP message stream over said IP network (column 12, lines 24-63); regarding claim 29, wherein said second

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SG uses a Stream Control Transfer Protocol SCTP to receive said IP message stream over said IP network (column 12, lines 24-63). It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Liao et al., by using the features, as taught by Shmulevich et al., in order to provide an efficient data communication system by offering error free and non-duplicated transfer of user data. See Shmulevich et al., column 12, lines 34-35.

6. Claims 27, 28, 30, 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liao et al. (US 6,611,533) in view of Mousseau et al. (Network Working Group, INTERNET DRAFT, *SS7 MTP2-User Adaptation Layer M3UA*, Feb 2001).

Liao et al. discloses the claimed limitations above. Liao et al. does not disclose the following features: regarding claim 27, wherein said first SG uses a Message Transfer Part 3-User Adaptation Layer (M3UA) to transport said SS7 signaling traffic in said IP message stream over said IP network (Page 22- 25); regarding claim 28, wherein said first SG uses a Nodal Interworking Function (NIF) layer to exchange SS7 signaling traffic between a Message Transfer Part (MTP) 3 layer and said M3UA layer (Page 22- 25); regarding claim 30, wherein said second SG uses a Message Transfer Part 3-User Adaptation Layer (M3UA) to recover said SS7 signaling traffic from said IP message stream (Page 22- 25); regarding claim 31, wherein said second SG uses a Nodal Interworking Function (NIF) layer to exchange SS7 signaling traffic between a Message Transfer Part (MTP) 3 layer and a Message Transfer Part 3-User Adaptation Layer (M3UA) layer (Page 22- 25). It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Liao et al., by using the features, as

taught by Mousseau et al., in order to provide an efficient data communication system by having network status information to one or both sides of the network. See Mousseau et al., Page 22.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Liao et al. (US 6,529,524) discloses a computer program product.

Lindgren et al. (US 6,411,632) discloses a network hub.

Miller et al. (US 6,324,183) discloses a system for communicating messages.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kwang B. Yao whose telephone number is 703-308-7583. The examiner can normally be reached on M-F.

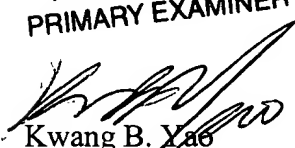
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H Pham can be reached on 703-305-4378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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KWANG BIN YAO
PRIMARY EXAMINER


Kwang B. Yao
August 1, 2004